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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/781,194	02/18/2004	Yoshinori Ichishi	4041J - 000838	1758

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HARNESS, DICKEY & PIERCE, P.L.C.
P.O. BOX 828
BLOOMFIELD HILLS, MI 48303

EXAMINER	
BANKHEAD, GENE LOUIS	
ART UNIT	**PAPER NUMBER**
3744	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/13/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/781,194	ICHISHI ET AL.	
	Examiner	Art Unit	
	Gene L. Bankhead	3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 December 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) *2,5,7,8,11-13,15-18,20,23-24,26 and 28-29* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *1,3,6,10,19,21,25,27 and 30* is/are rejected.

7)☐ Claim(s) *4,9,14 and 22* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *18 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,3,6,19,25,27,30 and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Noji et al (US 5157932).

Regarding claim 1, Noji et al. teach a passenger compartment temperature sensor 42 and a control unit 31. The control unit generates airflow into the passenger compartment based on the temperature detected by the passenger compartment sensor (column 4 lines 1-15, 52-57 and column 5 lines 22-25). Note the compartment temperature sensor is used to calculate the target outlet temperature, and that the airflow rate is generated in accord with the target outlet temperature (column 4 lines 52-57).

Noji et al. further teach a control algorithm, see Figure 5, used as a determining means for determining whether the compartment temperature sensor has detected an abnormal temperature; indicating the vehicle is too hot or too cold (column 3 lines 68-70 and columns 4 and 5 lines 1-65 respectively). Noji et al. teach an abnormal temperature as an target outlet temperature less than $T\alpha$ in step S6 or greater than $T\beta$ in step S8. Note that the compartment temperature sensor is used to calculate the target outlet temperature TAO (column 4 lines 1-12), and that the target outlet temperature is used to

determine if the vehicle compartment is too hot (column 5 lines 1-10 and 26-32) or too cold (column 6 lines 1-13).

They further teach a notifying means 53 capable of notifying a passenger when the determining means has sensed an abnormal temperature (column 5 lines 26-32 and column 6 lines 8-15). Though Noji et al. do not explicitly teach that the compartment temperature sensor is a non-contact temperature sensor, from Figure 2 it is inherent the temperature sensor 42 does not touch the passenger, and thus is in non-contact.

With regard to claim 3, Noji et al. teach the indicator is a light emitting device (column 8 lines 12-17 and Figures 6A to 6C) near the compartment temperature sensor, see Figure 3. Note examiner considers the indicator near the compartment temperature sensor, as the requisite degree of the term "near" (claim 3 line 3) has not been specified.

Regarding claim 6, Noji et al. teach all claim limitations of claim 1 and further teach an environment condition detection means 43 for detecting an amount of compartment solar radiation present (column 3 lines 35-40). They further teach the control unit generates an airflow rate into the passenger compartment based on the temperature detected by the insolation sensor 43 in addition to the temperature detected by the passenger compartment (column 4 lines 1-15, 52-57 and column 5 lines 22-25). They further teach the determining means determines whether the temperature detected by the non-contact temperature sensor is normal based on the temperature detected by the insolation sensor (column 4 lines 1-15,52-57 and column 5 lines 22-25). Note the detected insolation sensor temperature is used to calculate the target outlet

temperature, and that the target outlet temperature is used to determine if an abnormal temperature is present in steps S6 and S8.

In regard to claim 19, Noji et al. teach a vehicle air conditioner with a passenger compartment temperature sensor 42, a control unit 31, and an environment condition detection means 43, which detects an amount of compartment solar radiation present (column 3 lines 35-40). The control unit generates airflow into the passenger compartment based on the temperature detected by the passenger compartment sensor and solar radiation sensor (column 4 lines 1-15, 52-57 and column 5 lines 22-25). Note the compartment temperature sensor and solar radiation sensor are used to calculate the target outlet temperature, and that the airflow rate is generated in accord with the target outlet temperature (column 4 lines 52-57). Noji et al. further teach a control algorithm, see Figure 5, used as a determining means for determining whether the compartment temperature sensor has detected an abnormal temperature; indicating the vehicle is too hot or too cold (column 3 lines 68-70 and columns 4 and 5 lines 1-65 respectively).

FIG. 5

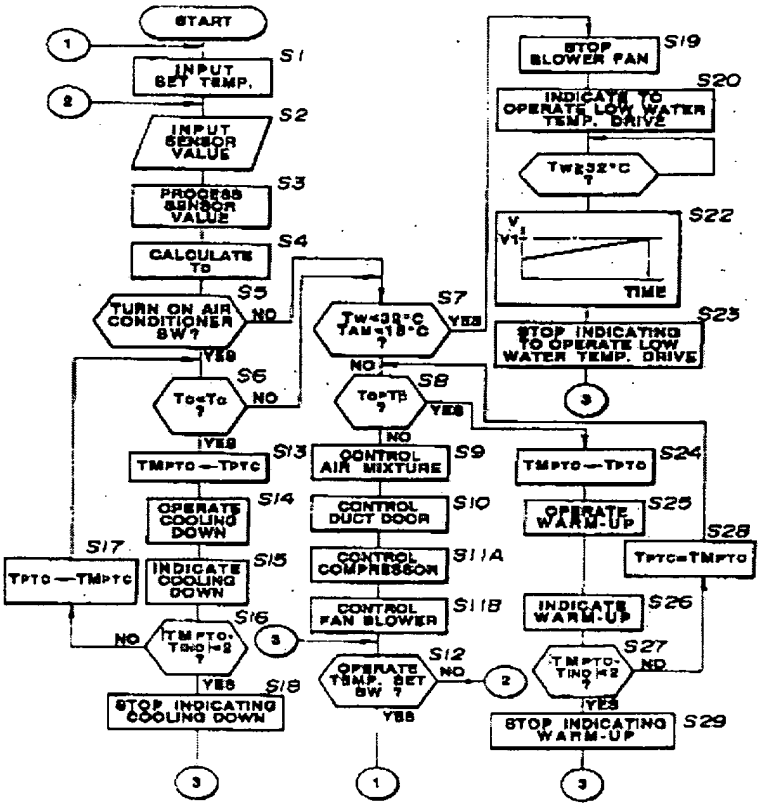

Figure 5 Noji et al. (US 557932)

Noji et al. teach an abnormal temperature as an outlet temperature less than Tα in step S6 or greater than Tβ in step S8. Note that the compartment temperature sensor is used to calculate the target outlet temperature TAO (column 4 lines 1-12), and that the target outlet temperature is used to determine if the vehicle compartment is too hot (column 5 lines 1-10 and 26-32) or too cold (column 6 lines 1-13).

They further teach a notifying means 53 capable of notifying a passenger when the determining means has sensed an abnormal temperature (column 5 lines 26-32 and

column 6 lines 8-15). Though Noji et al. do not explicitly teach that the compartment temperature sensor is a non-contact temperature sensor, from Figure 2 it is inherent the temperature sensor 42 does not touch the passenger, and thus is in non-contact.

Regarding claim 21, see the rejection of claim 10 as claims cite similar subject matter.

With regard to claim 25, Noji et al. teach the claimed process, as previously discussed.

In regard to claim 27, Noji et al. teach the claimed process, as previously discussed.

With regard to claim 30, Noji et al. further teach a notifying means 53 capable of notifying a passenger when the determining means has sensed an abnormal temperature (column 5 lines 26-32 and column 6 lines 8-15).

In regard to claim 34, Noji et al. teach all limitations of claim 27, and further see the rejection of claim 19 as claims cite similar subject matter

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 1,3,6,10,19,21,25,27, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamiya et al. (US 6202934) in view of Noji et al. (US 5157932).

Regarding claims 1,3,6,19,21,25,27 and 30 Noji et al. anticipate the claims as previously stated, Kamiya et al. further teach a vehicle air conditioner with a non-contact temperature sensor 70a for detecting a passenger compartment temperature (column 5 lines 6-15). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Noji et al. with the non-contact temperature sensor of Kamiya et al. because non-contact temperature sensors are able to detect temperatures over a wider region of the passenger compartment and more quickly than simple contact sensing temperature sensors. It is well known in the art that non-contact infrared temperature sensors are an excellent means for detecting temperature without direct contact at a very fast speed.

With regard to claims 10 and 21, Noji et al. teach all claim limitations however fail to explicitly teach a predetermined area with a plurality of temperature detection ranges. Kamiya et al. teach a plurality of temperature detection ranges A to P, (column 5 lines 12-20 and Figure 2), in the passenger compartment. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Noji et al. with the plurality of detection ranges of Kamiya et al. to advantageously detect a greater area of the passenger compartment, as a greater detection region ensures a more accurate temperature measurement.

Claims 4 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noji et al. in view of Kamiya et al. in further view of Omura (US 5408837).

Noji et al. in view of Kamiya et al. teach all limitations of claim 1, as previously stated, however they fail to teach a determining means that determines the temperature detected by the non-contact temperature sensor is abnormal based on a temperature detected a time before a present time and a temperature detected at the present time. Omura teaches an air conditioning system wherein an air temperature sensor 13 detects a temperature at two predetermined times apart from one another and compares both detected temperatures to each other with a comparator 15 (column 2 lines 58-68 and column 3 lines 1-20). Omura further teaches an abnormal detection signal output if the temperatures detected at both times are more than a predetermined value apart from one another (column 3 lines 25-30). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the Noji et al. determining means with the control algorithm of Omura to advantageously alert a passenger of a vehicle when an abnormal temperature has been detected over a period of time instead of at just one point in time, as sudden spikes or jumps in temperature are not an indication an abnormal condition is present. Only when a temperature has elevated above an abnormal temperature region for a period of time is an abnormal condition present.

Claims 1 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawai et al. (US 6397615) in view of Noji et al. (US 5157932).

Regarding claim 1, Kawai et al. teach an air conditioner 1 for a vehicle with a non-contact temperature sensor 31 that detects a temperature in a predetermined area of a passenger compartment in non-contact (column 1 lines 63-67 and column 2 lines 1-

5). They further teach a control unit 30 that controls an air state in the passenger compartment based on at least the temperature detected by the non-contact temperature sensor, and a determining means for determining whether or not the temperature detected by the non-contact temperature sensor of a subject in the vehicle by the surface contact temperature sensor corresponds to an actual temperature of the passenger compartment detected by the passenger compartment temperature sensor (column 2 lines 48-65 and column 3 lines 8-41). Kawai et al. however fail to teach a light emitting device adjacent to the non-contact temperature sensor to notify a passenger whether the temperature detected by the non-contact temperature sensor does not correspond to the actual temperature of the passenger compartment. Noji et al. teach a notifying means 53 capable of notifying a passenger when the determining means has sensed an abnormal temperature in the passenger compartment of a vehicle. Noji et al. further teach the light emitting device is a light emitting device (column 8 lines 12-17 and Figures 6A to 6C). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kawai et al. with Noji et al. to advantageously notify a user when an abnormal temperature is sensed in view of the teachings of Noji et al. (US 5157932). Though Noji et al. do not explicitly teach the light emitting device is adjacent to the non-contact temperature sensor it would have been an obvious matter of engineering design choice to position the light emitting device adjacent to the non-contact temperature sensor in order for a driver or passenger to visually recognize it while driving or in the passengers seat. Figure 4 (Kawai et al.)

teaches the non-contact temperature sensor is located in direct view of a passenger or driver.

Regarding claim 31, Kawai et al. in view of Noji et al. teach all limitations of claim 1 and further teach an outside temperature sensor 38, however fail to teach when the temperature detected by the non-contact temperature sensor does not correspond to the actual temperature, the notifying means does not notify a passenger in the passenger compartment. It would have been obvious to one of ordinary skill in the art at the time the invention was made to not notify a passenger when a temperature of outside air is lower than a predetermined temperature because there is would be no need to notify a passenger.

Allowable Subject Matter

Claims 4, 9, 14, 22, 32 and 33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments filed 01/03/07 have been fully considered but they are not persuasive.

With regard to claims 1, 3, 4, 6, 8, 9, 11-14, 19, 25, 27, 29 and 30 applicant argues the claimed invention to be patentable over Noji et al. because the claimed invention determines whether a sensed temperature of the vehicle passenger

compartment corresponds to an **actual** temperature of the vehicle passenger compartment whereas Noji et al. measures an actual temperature of the vehicle passenger compartment and then **assumes** the measured temperature to the an actual temperature. Examiner respectfully disagrees. A measured temperature in a vehicle is always considered to be the actual temperature of the vehicle. It is taken that a measured temperature and actual temperature are synonymous with one another. Thus the rejection to the claims is upheld.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gene L. Bankhead whose telephone number is (571)-272-8963. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on (571)-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CHERYL TYLER
SUPERVISORY PATENT EXAMINER

GB
Art Unit 3744
Examiner